INVESTIGATION CONCLUSION
ANOMALOUS SOIL SAMPLES
AT HUNTERS POINT NAVAL SHIPYARD
REVISION 1

April 2014

HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA

TETRA TECH EC, INC.
1230 Columbia Street, Suite 750
San Diego, California 92101-8536

ATTACHMENT 9

PERSONNEL INTERVIEWS

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Interview with Jeff Rolfe RCT on November 6, 2012

Apparent anomalous results in a number of survey units with your name on the COC. COC is a legal document. If this document is fraudulent in any way, a person may be subject to punishment for a federal crime. Navy is aware of this situation. NRC may be informed. Further investigation may be by the Inspector General, conducted by FBI agents. Anything to share?

There are different materials with different colors and different cross sections of soil types. Sometimes used a Hilti gun to loosen soil, and followed a map from the engineers to mark soil locations. Sometimes they may not have rinsed off equipment all of the way in between sample collection. Nothing else to shed on it.

Big picture question: How are samples collected and what are the results used for?

Steve Rolfe (HPS Supervisor) provides a sample point map and anything necessary to collect samples. Two or three laborers (Jorge, Enrique, Tommy Jackson and/or Miguel) would assist with digging or loosening soil. He would wait until soil was loosened to collect samples. Usually there were 2 RCTs and 2 laborers. Assignments change daily. The soil sample results are used to determine whether a survey unit could be released or if it needed to be remediated. The RCT filling out the COC would bag the samples, take them to the connex box by the control point, double bag the samples, and fill out the COC forms. If sampling was not done at lunch time, the sample bags would be locked in the connex box, or left in a cart in the RCA. When all of the soil samples for the survey unit were collected, they were transported to the onsite lab, and custody was transferred to the lab technician.

In (area of interest specific to individual), who was involved in the sampling?

Jorge and Miguel sometimes assisted in putting soil into the sample bags.

Describe the tools used, and methodology.

"Whatever Steve said to do". Sometimes a backhoe bucket was used to scrape the soil surface. Sometimes he was told to sample to 12 or 18" below ground surface by the HP Supervisors (Steve or Justin). There was no reason stated for the change is sampling depth. When directed to dig at a deeper depth, this was consistent across the entire survey unit. Steve sometimes indicated some areas had radium or cesium.

Approximately how long to collect a sample.

It depends on the laborer, from 3 to 5 minutes, maybe longer for harder surfaces. To re-do the 36 soil samples in Building Site 517 Survey Unit 2 took 1.5 to 2 hours.

When do you sign a COC, and what do you believe that signifies?

It signifies that he is responsible for the sample.

Ask individual to read results on a gamma spec analysis sheet.

He doesn't have any experience reading analytical data.

Are you aware of or have you participated in sampling areas outside of the Survey sites or any sample tampering or rumors of inappropriate sample handling?

Not aware of any inappropriate sampling.

Interview Questions for Steve Rolfe, HP Supervisor for Jeff Rolfe, on November 7, 2012

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He had no theories, and was not aware of any improprieties. Nobody directed him to do anything illegal.

Big picture question: How are samples collected and what are the results used for?

Soil was moved around during preparation up to a foot in the Building 517, 509, and 500 survey unit 1. Concrete was on top of 517. 509 had "beach sand" in the concrete area. 517 had "utility sand". 509 area had 4000- 5000 cpm using a Ludlum 44-10; 517 had 7000-8000 cpm. The engineers have a map that shows sample locations. The laborers do the digging and picking to 6-8 inches deep, and sometimes put the dirt in the bags. A backhoe was used sometimes because the dirt was hard "like a road". Steve didn't do any digging because he has trouble with his hip. The RCTs take gamma static readings with a Ludlum 44-10. He drove the RCT to the lab for the transfer on the COC, and drops off meter readings to Thorpe Miller. George Chiu sends an e-mail to multiple people if a survey unit passes or fails. If remediation is necessary, a characterization map is provided.

In (area of interest specific to individual), who was involved in the sampling?

RCTs and laborers – Jorge Colonel, Jeff Langston, Reggie using the Bobcat.

Describe the tools used, and methodology.

Backhoe was sometimes used to break up hard soil. It was brought up in a morning meeting that the backhoe bucket was difficult to decontaminate, so they stopped using it. Sometimes picks were used, and sometimes a chipper hammer used at an angle.

Approximately how long to collect a sample.

In 500 series, to collect 36 samples took 2 to 3 hours using equipment, depending on how hard the surface is. Some laborers took 5 hours to collect all the samples in a survey unit.

When do you sign a COC, and what do you believe that signifies?

The whole purpose of the Chain of Custody is whoever feels responsible for the sample fills out the paperwork. Steve sets up the crew to work, and lets them go. He provides a map to the laborers and RCTs. If post-remediation samples are needed, he directs that the sample be taken under the "hot spot", after he has received sample numbering from Thorpe Miller.

Ask individual to read results on a gamma spec analysis sheet.

He doesn't look at the gamma spec sheets. He basically follows George Chiu's e-mail instructions.

Are you aware of or have you participated in sampling areas outside of the Survey sites or any sample tampering or rumors of inappropriate sample handling?

"No, not aware of any of that."

Extra Information:

Serpentinite is different weird looking stuff.

The 500 series was late. They ran out of time for Site 707. For the 500 series they had "been in a year, and no billing."

Bill told Dennis he wanted to characterize many spots in Building 500 SU 23/24 to see what to remediate. In that survey unit, there were different layers of asphalt and dirt.

Interview Questions for Justin Hubbard, HP Supervisor on November 6, 2012

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A person can't tell what soil is "clean" with a meter.

Big picture question: How are samples collected and what are the results used for?

"Map guy" (Allen Crabtree) gives the maps for sample locations. He only has one crew, so only one survey unit done at a time. Could maybe do 2 survey units in one day.

In (area of interest specific to individual), who was involved in the sampling?

Blake Willet, Ray Roberson and Joey Cunningham (all RCTs). Justin micromanages.

Describe the tools used, and methodology.

Garden trowel, picks and shovels were used. No excavator was used.

Approximately how long to collect a sample.

5 minutes per sample on average. One sample could take 40 minutes if sifting was necessary. Could be there all day for 1 survey unit. 2 survey units could maybe be completed in one day.

When do you sign a COC, and what do you believe that signifies?

Only senior RCTs sign COCs. Justin sometimes signs off. Usually Joe Cunningham or Ray Roberson. The person dropping the samples off at the onsite lab delivers samples. No laborer delivers samples to the lab.

Ask individual to read results on a gamma spec analysis sheet.

Not really familiar with. Thorpe Miller's report shows Ra-226 and Cs-137 hits. Justin is not really looking at the data. If a survey unit passes, he tells his crew. If not, he goes over the points that need to be remediated.

Are you aware of or have you participated in sampling areas outside of the Survey sites or any sample tampering or rumors of inappropriate sample handling?

"Nobody has ever spiked a sample."

"Nobody tells me what to do."

Extra:

Serpentinite soil is green/gray like the hill.

There is no pressure to get a job done, only pressure to do it correctly.

Interview Questions with Ray Roberson, RCT, on November 6, 2012

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No.

Big picture question: How are samples collected and what are the results used for?

He sampled North Pier with Joe Cunningham and Blake Willet. There was a lot of 1.25" and 1.5" rock that was pretty deep. Engineers lay out sample points, and Justin directs RCTs to take samples. Engineers can re-mark sample point spot if the area is inaccessible. They are only allowed to deviate less than 1 foot than the spot marked by the engineers. They have bent augers trying to collect samples. For trenches, used a manlift and auger to collect 18 systematic samples. The sample is double bagged, sticker put on the bag, and a microR/hr reading taken on the sample bag. The RCTs decide who will sign the COC. Being honest, the times listed as collected are not exact because these are filled out with the paperwork later in the connex box at the control point. The sample bags are taken to the lab for transfer using a company vehicle, with 4 copies, one for Justin (HP Supervisor), 1 for the lab lead, one for the person who processes the samples, one for Thorpe Miller (database manager). He never sees actual soil sample results.

In (area of interest specific to individual), who was involved in the sampling?

Joe Cunningham, Blake Willet and Ray Roberson

Describe the tools used, and methodology.

Shovels. The soil was pretty wet, and difficult to sift out.

Approximately how long to collect a sample.

4-5 or 6-7 minutes per sample. Could sample 2 survey units in one day, maybe. If you can't finish a survey unit in one day, then the COCs would be torn up, and re-done the next day.

When do you sign a COC, and what do you believe that signifies?

Custody of the sample. One of the senior RCTs signs, either Ray of Joey. "My name is on the COC." "The one thing an RCT has is integrity."

Ask individual to read results on a gamma spec analysis sheet.

Never sees the results.

Are you aware of or have you participated in sampling areas outside of the Survey sites or any sample tampering or rumors of inappropriate sample handling?

Not to his knowledge.

Extra:

Serpentinite rock has different colors and textures.

Never felt pressure to get a survey unit to pass.

If there are only 2 RCTs, and not a third to watch control point, the fence would be closed, or a rope strung across the opening.

Interview Questions for Phil Smith, Lab supervisor, on November 7, 2012

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Could not be caused internally in lab. Maybe differences caused by different layers of soil and landfill soil.

Big picture question: How are samples collected and what are the results used for?

Samples are collected and delivered to the lab receiving connex. This connex is always locked unless occupied by lab technicians. Field personnel lay bags out on the table. Samples are double bagged with the outside label with a barcode. These are scanned into the LIMS system with an electronic COC. A secondary label is printed. Usually one set of COCs is turned in at a time. There is a less than 1% chance for a mix up of samples.

How are samples accepted in Chain of Custody?

Times and dates are checked against the cover sheet with the OOCs. Pans for the are labeled by sample number. Sample is put in respective pan, and the barcode is scanned.

How are samples secured from other individuals?

In sample receipt lab connex with security combination only known by lab techs.

Describe sample preparation process.

Samples are in the connex. Rick Weingarz can prioritize samples. Samples are moved from the storage to the prep connex next to it. Each sample pan is lined with labeled aluminum foil, pan is put into the oven, and logged into the logbook. The sample is dried in the oven for 5 hours. Samples cool, and are processed one at a time, crushed and sieved. Material looks the same after crushing and sieving except pieces are smaller. Samples are canned and stored in gamma spectroscopy lab for analysis. Transferred to Building 258 for final disposition.

When do you sign a COC, and what do you believe that signifies?

Signifies chain of custody matches labels, soil bags, and that soil can be processed.

Production goal is 400 samples per week. This is not undo pressure, and can be done at a normal work pace. Sometimes overtime is worked. There is no pressure for "clean or dirty" samples.

Are you aware of or have you participated in sampling areas outside of the Survey sites or any sample tampering or rumors of inappropriate sample handling?

Not aware of any. Not really involved in the sampling.

There is no knowledge of where the samples came from.

He hasn't seen any materials that looked questionable.

Extra:

Lab techs have only access to samples.

Any lab tech can perform any process.

At the time, had 6 lab techs and Paul Wall as the lab manager.

Interview Questions for Chanthachone Alexander, lab technician, on November 7, 2012

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Had not heard of any soil sample tampering. The lab is so busy.

Big picture question: How are samples collected and what are the results used for?

How are samples accepted in Chain of Custody?

Soil samples are put on the table. She checks stickers, date, times, and computer COC, and verifies with COC. Samples are not accepted if there is a mistake. If OK, sign off on COC, and put a copy of the COCs in laminant on the front of the bins.

How are samples secured from other individuals?

Always locked in receipt connex or prep connex. If an RCT needs to get something from the connex, a lab technician must be with them.

Describe sample preparation process.

Put sample with label in oven top to bottom, and heat for 4 hours. Take out from bottom to top, and allow for 2 hours to cool. Get stickers on tuna cans. The Lab Control standard and lab blank are done first. Masslin wipe the work area. Put labels on the cans. Can the sample, weigh the can, and enter the can. Wipe every can to ensure no contamination. Put cans on the shelf.

When do you sign a COC, and what do you believe that signifies?

I have control of the sample, and it is my responsibility.

Are you aware of or have you participated in sampling areas outside of the Survey sites or any sample tampering or rumors of inappropriate sample handling?

Not aware of any inappropriate sampling.

Extra:

Excess, filtered sample is stored in ziplok bags kept in bin with samples in tuna cans. Soil in the can should resemble the soil in the tuna cans, but the bag may have bigger pieces.

The only thing that she will typically notice is if the samples are mostly rock or large pieces because it is more work to grind with a mortar and pestle.

Interview Questions for Chris Fluty, Lab Technician, on November 7, 2012

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No knowledge of soil mishandling. No rumors about soil mishandling.

Big picture question: How are samples collected and what are the results used for?

Samples used for release of areas.

How are samples accepted in Chain of Custody?

In the receiving connex, all of the samples are laid on the table by the RCT. Stickers on COCs are verified to see if information is correct. Fill out the electronic copy of the COC. If everything matches, sign off on the COC. Original COC goes to Robin Fluty, a copy of the COC goes on the bin with the samples.

How are samples secured from other individuals?

Locked in receipt or processing connex.

Describe sample preparation process.

Stacked in ovens with stickers corresponding with the sample number, and documented in the computer LIMS system. Samples in oven for 4-5 hours. Cooling time is 1 to 3 hours. Prepare the samples under the fume hood including sieving, weighing, and deconning everything. Once canned, the sample is put into the bin with the rest of the batch and then counted on the gamma spec detectors.

When do you sign a COC, and what do you believe that signifies?

It means he received it and is taking over custody. The samples are his responsibility.

Are you aware of or have you participated in sampling areas outside of the Survey sites or any sample tampering or rumors of inappropriate sample handling?

See above

Interview Questions for Andy Alexander, Lab Tech, on November 7, 2012

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He is not aware of any improprieties. Not aware of much that takes place in the field.

Big picture question: How are samples collected and what are the results used for?

RCT brings samples into the receipt connex and lays out in order. He makes a visual check against the sample bags and the COC. Thorpe Miller sets up the COCs electronically. If all the samples are accounted for and coorect, he manually enters times and signs the COC, and logs that he has received the samples. Puts new stickers with bar codes on top of the bags, and in reverse order in the box. The original COC is put with the samples in the bin.

How are samples accepted in Chain of Custody?

See above.

How are samples secured from other individuals?

In the receipt connex or processing connex staging area that is locked. Only lab personnel have lock combination.

Describe sample preparation process.

For example, say there are 24 samples in a batch together, fill 24 pans with aluminum foil, and label going in order of sample number. 6 pans go into a tray. The lab calibration standard and blank go in separately. They are all put in the oven for 4-5 hours at least, and then transferred to the cooling rack. Then can the LCS and blank first. Then put stickers on tuna cans. He checks the texture of the soil, if siftable, then sieves. If not, then use mortar and pestle to grind until have at least 300 grams for the tuna can. Then decons everything with a masslin wipe.

When do you sign a COC, and what do you believe that signifies?

Make sure all of the soil listed on the COC is present. If something is missing, or the numbers don't match up, he does not accept the soil samples.

Are you aware of or have you participated in sampling areas outside of the Survey sites or any sample tampering or rumors of inappropriate sample handling?

See above

Extra:

They never split up sets of samples – they are always processed as a unit.

Doesn't recall accepting samples that did not look right.

Doesn't know what areas the soil is from.

Doesn't have time to differentiate between different soil types.

Doesn't have the ability to alter gamma spectroscopy detector results.

Interview Questions for Robin Fluty, Lab Supervisor, on November 7, 2012

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No knowledge of any impropriety. No reason for anybody in the lab to do because the more samples there are to read, the longer the lab technicians have jobs onsite.

Big picture question: How are samples collected and what are the results used for?

Samples and COC are put on the receiving table by the RCT bringing the sample. If the samples and COC match, she signs the COC for receipt, and puts a copy of the original in the office. A copy of the COC is put on the box with the soil samples. A LIMS system barcode is put on each sample ziplok bag.

How are samples accepted in Chain of Custody?

See above.

How are samples secured from other individuals?

Locked in the receipt connex or processing connex. Lab techs have combination.

Describe sample preparation process.

In the process connex, mark ID numbers of samples on foil in pans. Put pans in the oven for 4-5 hours, often times overnight. Lab technicians and Bruce Godfrey (C&T lab manager) have combinations. After that, the samples are cooled in the cooling rack. The samples are then processed under the air hood, and weighs sample after canned. The cans are labeled with the barcode that Thorpe Miller prints out. The cans are put back in the box. Prior to canning, the samples are crushed with a mortar and pestle and sieved. Excess material is kept in the ziplok bag associated with the sample.

When do you sign a COC, and what do you believe that signifies?

This signifies that she has custody of the sample, and samples are what they say they are.

Are you aware of or have you participated in sampling areas outside of the Survey sites or any sample tampering or rumors of inappropriate sample handling?

See above.

Extra:

There is no pressure for results on the number of samples. There is a goal, but not pressure.

She doesn't pay attention much to whether samples pass or not.

Nothing has ever looked strange as far as the sample type she has accepted.

She doesn't particularly care what goes on in the field.

Sometimes they rotate who performs what duties within the lab.

It is rare for one person to perform all aspects of soil COC receipt, preparation and gamma spectroscopy analysis for an entire batch from start to finish.

She has no ideas on how an entire set of systematic samples could have such similar radionuclide concentrations, and not be similar to a previous set from the same location.

Interview with Bryan White

Bryan White performed quality control surveillances periodically for soil sample collection evolutions all over the HPNS site.

In his surveillances he noted:

The chain of custody is typically signed by a Radiation Control Technician as opposed to a laborer who may be helping with loosening or collecting soil.

The laboratory technician in the onsite C&T laboratory signs for receipt of the soil samples.

Sampling in the Radiological Screening Yard in complete sets.

Typically, sampling in the field is performed in complete sets, i.e., all samples of a survey unit are turned over to the onsite C&T lab at one time, as opposed to in small sets.

If the RCTs and sampling crew go to lunch, the samples are typically secured in the connex box at the radiological control point for the Radiologically Controlled Area in which the samples are collected.

He believes that RCTs have an experiential knowledge of soil types (i.e., some soils contain less naturally occurring radioactive materials than others, and these soils can be identified by color and other visual characteristics.)

The Health Physics Supervisor is generally around in the area during soil sampling, although at times the HP supervisor may be overseeing 2 projects at once.

Typically, collecting samples in one trench in a day is the maximum due to the difficulties in collecting samples from a manlift, and the awkward nature of digging through mud at a distance.

A 10 foot tool is used to collect samples in a trench.

When samples are collected from a trench, they could be collected by a laborer or an RCT, although at least one RCT is always present for radiological oversight. Typically there are 3 people on a sampling team.

His personal opinion is that individuals collecting soil samples dug deeper than the required six inches to collect soil samples, and may have collected a different material type.

He stated that he "was absolutely certain nobody did anything illegal", and that the problem in soil sampling with respect to the Building 517 Site survey unit 2 sampling was "pilot error."

Interview with Jorge Colonel, a laborer assisting with soil sampling collection, conducted November 7, 2012

Jorge stated that:

For soil sampling, he helped with digging using a pick or shovel, and sometimes using a drill hammer if the ground surface was hard and difficult to break up. He typically dug 6 inches to loosen up the dirt.

If direction to dig deeper than 6 inches ever was given, the direction came from HP Supervisor, Steve Rolfe. If so, it was the same depth across the entire survey unit.

When a drill hammer is needed, Steve Rolfe gives the direction to use it.

In some areas in the Parcel E 500 series, he was instructed to dig to a depth of 8-12 inches but was not sure why.

In some cases, such as around Building 521, a backhoe was sometimes used to scrape the surface and loosen dirt. This method was then abandoned, but he did not know why.

Sometimes laborers fill sample bags with soil, but do not fill out chain of custody paperwork.

When asked directly if soil was sampled outside of a survey unit, he was taken aback, and stated that soil samples are only collected at the orange spots marked on the ground by the engineers.

RCTs are the only ones to fill out chain of custody paperwork.

He always worked with the same crew of laborers: Martin Torres, Enrique Mangaya, Miguel Solis.

He performed sampling sometimes in trenches, which was typically 18 samples in a trench, and sometimes took up to 10 minutes to collect a soil sample.

When asked directly, he stated that he never had any pressure from management to meet deadlines, and that he had no knowledge of any impropriety.

Interview with Jarvis Jensen, Health Physicist on November 8, 2012

When asked about knowledge of the Building 517 survey unit 2, he stated that he became aware of the situation during the bi-weekly RASO phone call.

He initially looked at the soil bags from the soil samples collected in the area that Adam Berry had taken from the laboratory, and the rock appeared to be greenish serpentinite. He thought after looking at the surface of Building 517 suvey unit 2 that the soil type did not match, so that maybe the RCTs and samplers had sampled deeper than 6 inches to collect the samples.

RCTs appear to have general knowledge that green serpentinite usually provides "low" gamma spec results, and "brownish dirt" provides elevated gamma spectroscopy readings.

When asked explicitly, he stated that he has not heard anyone state that soil samples were collected outside of the survey unit in which it was expected to be collected.

Interview with Reggie Young, laborer on November 8, 2012

He stated that he assisted in collecting soil samples in the Building Site 707 and 500 Series.

He assisted with shoveling and using a pick to kloosen soil, and sometimes assisted with bagging soil.

He dug to collect soil in the top 6 inches of soil below top grade, based on guidance provided by Jeff Rolfe.

Sometimes if the soil collected was below rock, he sifted soil off the sampling equipment before decontamination between each soil sample collection. When directly asked, he stated that he was never asked to sample anything strange, or outside of a survey unit.

He was unaware of anyone else stating that they had sampled from an unusual area.

An RCT was always present for soil sample collection, even when collecting soil samples on a Radiological Screening Yard pad, as the RCT provides equipment, and scans equipment after decontamination of equipment between samples.

Interview with Jeff Langston, Laborer, on November 8, 2012

He stated he sometimes collected samples with RCT Rick Zahensky, and that he shoveled soil to put in a sample bag, or used a pick to loosen hard soil.

Samples were collected at the numbered sample points spray painted on the ground by the engineers.

He dug at depths from 6 inches to 12 inches based on direction from the RCT with him during sampling.

All soil sampling he was involved with was done with hand tools – he was not involved with sampling when a backhoe or other machinery was used to loosen soil.

He stated that he always collected soil samples right on the dot spray painted in the survey unit, and no place else.

He was unaware of selective soil sampling based on color or appearance of soil.

He had no knowledge of anyone sampling in areas outside of survey units.